COMMONWEALTH OF VIRGINIA
DEPARTMENT OF MINES, MINERALS AND ENERGY
DIVISION OF MINED LAND RECLAMATION
P. O. DRAWER 900; BIG STONE GAP, VA 24219
TELEPHONE: (276) 523-8191

LINE TRANSECT - FOREST LAND COUNT

(Instructions on Page 2)

COMPANY				**Permit No.**	
Sampled by				Date	
No. Acres		Tree or Shrub Species		Date Planted	

	MIL - ACRE PLOT										**COUNTABLE TREES**		
Transect	1	2	3	4	5	6	7	8	9	10	SUM x	(x-?)	(x-?)?
1													
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													
										SUM			
										?			

ss = ?(x-?)? # plots for s? of 0.50 = 10(s/.50)?

$s? = \frac{\overline{ss}}{? n(n-1)}$ $s = \frac{ss}{? (n-1)}$

STOCKING: Total _____ ± _____/acre

Recommendation:	

Instructions

1. The Mil-acre plot form may be used separately for ground cover and tree count. **If you are using this form for ground cover, complete only to the sum.**

2. Use uniformly spaced circular Mil-acre plots for most sampling - transects are acceptable.

3. Run sample lines across seedling rows.

4. Divide length of sample line by the number of plots desired to obtain distance between plots.

5. Use permit maps to indicate direction of seedling rows, lay out sample lines, and calculate distance between plots.

6. Tally up to 2 seedlings per plot if the 2 seedlings area t least 4 feet apart. (Mil-acre stick is 3.725 feet long, which is close enough to use.)

7. **Minimum sample size:** 50 plots up to 5 acres. 100 plots for all tracts in excess of 5 acres.

8. **Maximum sample size:** 200 plots (or 20 transects).

9. **Acceptable standard error:** Estimate of the number of seedlings per acre minus 400, or 50 seedlings per acre; whichever is larger. (Examples -)

    a) If the estimate is 750/acre, the standard error can be anything up to ± 350/acre (750-400).

    b) If the estimate is 200/acre, the standard error can be anything up to ± 200/acre (200-400).

    c) If the estimate is 430/acre, the standard error can be anything up to ± 50/acre (430-400 is less than 50, the smallest standard error required.)

Definitions:

? = Mean or average

ss = sum of squares = sum of squared deviations from the mean = ?(x-?)?

s? = Standard error = $\sqrt{\frac{ss}{n(n-1)}}$

s = Standard Deviation = $\sqrt{\frac{ss}{n-1}}$

Number of plots needed for a standard error of .50 = 10(s/.50)? = 10(2s)?